

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1.-12. (Canceled)

13. (New) A device for measuring a clearance distance and a speed of an object using radar pulses, comprising:

a receiver-side mixer that correlates received radar pulses with delayed transmitter-side radar pulses;

a control device for specifying range gates within which radar pulses that are to be supplied to the mixer are continuously changeable increasingly and/or decreasingly with respect to their pulse delay;

a switchover device for at least one of:

implementing a plurality of operating modes for holding constant transmitter-side radar pulses that are able to be supplied to the mixer with respect to their delay, in order to measure Doppler frequencies,

for one of resetting and raising the delay to one of a current starting value and a new starting value, and

for producing a continuous delay into a direction that runs opposite to a preceding change; and

an evaluating device for determining distance and speed values in response to an output signal from the mixer.

14. (New) The device as recited in Claim 13, wherein the evaluating device prognosticates speed values from established distance changes that are one of verified and finely corrected based on the measured Doppler frequencies.

15. (New) The device as recited in Claim 13, wherein the evaluating device determines limits of the range gates based on the ascertained speed values.

16. (New) The device as recited in Claim 13, wherein the switchover device is controllable by the control device in such a way that, in response to a range gate change, a Doppler frequency measurement is made by holding constant the delay of the transmitter-side radar pulses that are able to be supplied to the mixer.
17. (New) The device as recited in Claim 13, wherein the evaluating device detects a moved object based on an increasing speed gradient/amplitude.
18. (New) The device as recited in Claim 13, wherein the evaluating device detects a position of a moving object based on a maximum amplitude of the Doppler frequency measurement.
19. (New) The device as recited in Claim 18, wherein the evaluating device estimates a speed offset for a detected position of the object.
20. (New) The device as recited in Claim 13, wherein the switchover device is controllable in an event-triggered manner corresponding to a switchover to another operating mode by holding constant the delay of the transmitter-side radar pulses supplied to the mixer in the case of one of the previous variation of the delay and the changing of the delay into the opposite direction based on a detected reflection.
21. (New) The device as recited in Claim 13, wherein, for a plausibility check of an object detection in response to a detected reflection, the delay of the transmitter-side radar pulses that are able to be supplied to the mixer are changeable in the opposite direction in such a way that an additional reflection may be obtained which is able to be correlated with the previously detected reflection.
22. (New) The device as recited in Claim 21, wherein the evaluating device draws up a clearance distance history from clearance distance measurements and detects object patterns based on the clearance distance history.
23. (New) The device as recited in Claim 13, wherein the evaluating device draws up estimated values for the speed measurements for expected crash situations.

24. (New) The device as recited in Claim 23, wherein the evaluating device, in response to expected crash situations, controls the switchover device into the operating mode of holding constant the radar pulses with respect to their delay, in order to measure Doppler frequencies.